CLAIMS

What is claimed is:

1. An extra capacity radio base station for a wireless communication system, comprising:

a first radio base station providing wireless communication to at least one sector of the wireless communication system, the first radio base station coupled to a first group of *n* radios, where *n* is an integer, the first group of *n* radios transmitting and receiving frequencies in at least one range of 806-960 MHz, 1710-1855 MHz, 2500-2690 MHz, and 2.4 GHz-2.5 GHz; and

a second radio base station coupled to the first radio base station, the second radio base station also providing wireless communication to the at least one sector, the second radio base station coupled to a second group of *n* radios, the second group of *n* radios also transmitting and receiving frequencies in at least one range of 806-960 MHz, 1710-1855 MHz, 2500-2690 MHz, and 2.4 GHz-2.5 GHz,

wherein the first radio base station coupled to the second radio base station creates the extra capacity radio base station, the extra capacity radio base station utilizing an extra control radio to create $2n+1$ radios available for voice and data communication to the at least one sector of the wireless communication system.

2. A 3x15 radio base station for a wireless communication system, comprising:

a first 3x7 radio base station providing wireless communication to three sectors of the wireless communication system, the first 3x7 radio base station coupled to a first group of seven radios per each sector of the three sectors; and

a second 3x7 radio base station coupled to the first 3x7 radio base station, the second 3x7 radio base station also providing wireless communication to the three sectors, the

second 3x7 radio base station coupled to a second group of seven radios per each sector of the three sectors,

wherein the first 3x7 radio base station coupled to the second 3x7 radio base station creates the 3x15 radio base station, the 3x15 radio base station providing the three sectors with fifteen radios per each sector.

3. A 3x15 radio base station according to claim 2, wherein the 3x15 radio base station transmits and receives frequencies between 806-960 MHz.

4. A 3x15 radio base station according to claim 2, wherein the 3x15 radio base station transmits and receives frequencies between 1710-1855 MHz.

5. A 3x15 radio base station according to claim 2, wherein the 3x15 radio base station transmits and receives frequencies between 2500-2690 MHz.

6. A 3x15 radio base station according to claim 2, wherein the 3x15 radio base station transmits and receives frequencies between 2.4 GHz-2.5 GHz.

7. A 3x15 radio base station according to claim 2, wherein the first 3x7 radio base station comprises a cabinet to protect electronic equipment from environmental exposure.

8. A 3x15 radio base station according to claim 2, wherein the second 3x7 radio base station comprises a cabinet to protect electronic equipment from environmental exposure.

9. A 3x15 radio base station according to claim 2, wherein the first 3x7 radio base station comprises a prefabricated structure.

10. A 3x15 radio base station according to claim 2, wherein the second 3x7 radio base station comprises a prefabricated structure.

11. A 3x15 radio base station for a wireless communication system, comprising:

a first 3x7 radio base station providing wireless communication to three sectors of the wireless communication system, the first 3x7 radio base station coupled to a first group of seven radios per each sector of the three sectors, the first group of seven radios transmitting and receiving frequencies in at least one range of 806-960 MHz, 1710-1855 MHz, 2500-2690 MHz, and 2.4 GHz-2.5 GHz; and

a second 3x7 radio base station coupled to the first 3x7 radio base station, the second 3x7 radio base station also providing wireless communication to the three sectors, the second 3x7 radio base station coupled to a second group of seven radios per each sector of the three sectors, the second group of seven radios transmitting and receiving frequencies in at least one range of 806-960 MHz, 1710-1855 MHz, 2500-2690 MHz, and 2.4 GHz-2.5 GHz,

wherein the first 3x7 radio base station coupled to the second 3x7 radio base station creates the 3x15 radio base station, the 3x15 radio base station providing the three sectors with fifteen radios per each sector.

12. A 3x15 radio base station for a wireless communication system, comprising:

a first 3x7 radio base station and a second 3x7 radio base station, the first 3x7 radio base station and the second 3x7 radio base station each providing wireless communication to three sectors within the wireless communication system;

the first 3x7 radio base station comprising a first group of seven radios per sector, a first measuring coupler unit, and a first power splitter unit, the first measuring coupler unit for amplifying and splitting received signals, and the first power splitter unit for distributing received signals; and

the second 3x7 radio base station coupled to the first 3x7 radio base station, the second radio base station comprising a second group of seven radios per sector, a second

measuring coupler unit, and a second power splitter unit, the second measuring coupler unit also for amplifying and splitting received signals, the second power splitter unit also for distributing received signals,

wherein the first 3x7 radio base station coupled to the second 3x7 radio base station creates the 3x15 radio base station, the 3x15 radio base station providing the three sectors with fifteen radios per each sector.

13. A 3x15 radio base station according to claim 12, wherein the first measuring coupler unit is coupled to the second power splitter unit.

14. A 3x15 radio base station according to claim 12, wherein the second measuring coupler unit is coupled to the first power splitter unit.

15. A 3x15 radio base station according to claim 12, wherein the first measuring coupler unit is coupled to the first power splitter unit and to the second power splitter unit.

16. A 3x15 radio base station according to claim 12, wherein the second measuring coupler unit is coupled to the second power splitter unit and to the first power splitter unit.

17. A 3x15 radio base station according to claim 12, wherein the first 3x7 radio base station further comprises a first radio frequency test loop, the first radio frequency test loop coupled to the first measuring coupler unit and to the second measuring coupler unit.

18. A 3x15 radio base station according to claim 12, wherein the second 3x7 radio base station further comprises a second radio frequency test loop, the second radio frequency test loop coupled to the second measuring coupler unit and to the first measuring coupler unit.

19. A 3x15 radio base station according to claim 12, wherein the 3x15 radio base station transmits and receives frequencies in at least one range of 806-960 MHz, 1710-1855 MHz, 2500-2690 MHz, and 2.4 GHz-2.5 GHz.

20. A 3x15 radio base station for a wireless communication system, comprising:

a first 3x7 radio base station and a second 3x7 radio base station, the first 3x7 radio base station and the second 3x7 radio base station each providing wireless communication to three sectors within the wireless communication system;

the first 3x7 radio base station comprising a first group of seven radios per sector, a first measuring coupler unit, a first power splitter unit, and a first radio frequency test loop, the first measuring coupler unit for amplifying and splitting received signals, the first power splitter unit for distributing received signals, and the first radio frequency test loop for calibration and test of the first 3x7 radio base station;

the second radio base station comprising a second group of seven radios per sector, a second measuring coupler unit, a second power splitter unit, and a second radio frequency test loop, the second measuring coupler unit also for amplifying and splitting received signals, the second power splitter unit also for distributing received signals, and the second radio frequency test loop for calibration and test of the second 3x7 radio base station;

the first measuring coupler unit coupled to the first power splitter unit and to the second power splitter unit, the first radio frequency test loop coupled to the first measuring coupler unit and to the second measuring coupler unit; and

the second measuring coupler unit coupled to the second power splitter unit and to the first power splitter unit, the second radio frequency test loop coupled to the second measuring coupler unit and to the first measuring coupler unit,

wherein the first 3x7 radio base station couples to the second 3x7 radio base station to create the 3x15 radio base station, the 3x15 radio base station providing the three sectors with fifteen radios per each sector, the 3x15 radio base station transmitting and receiving

frequencies in at least one range of 806-960 MHz, 1710-1855 MHz, 2500-2690 MHz, and 2.4 GHz-2.5 GHz.